

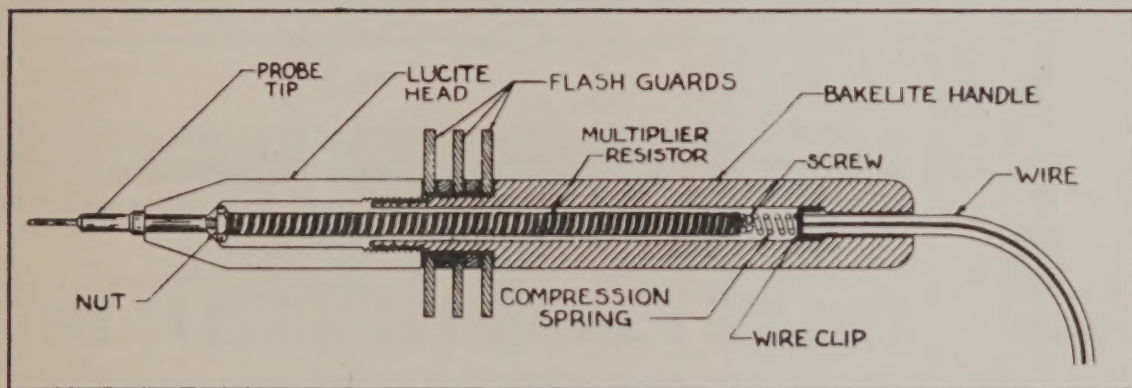




Operating Instructions For High Voltage Probe  
MODEL HVP-1



# HIGH VOLTAGE PROBE



When ordering:

Please designate resistor value, per inclosed chart.

**ELECTRONIC INSTRUMENT CO., INC.**



MULTIPLIER RESISTANCES FOR VARIOUS INSTRUMENTS

MANUFACTURER	MODEL NO.	TYPE INST.	TO GIVE A HIGH VOLTAGE RANGE OF	WITH INST. SET UP FOR	RESISTANCE (MEGOHMS)	CONNECTOR TYPE
Elec. Design	100	VTVM	10 KV 30 KV	1000V 1000V	100 320	Phone Plug
Elec. Inst. Co.	113A 210 221	VTVM VTVM VTVM	10 KV 10 KV 10 KV	1000V 1000V 1000V	240 225 240	" "
Elec. Mfg. Co.	100-110	VTVM	30 KV 15 KV 30 KV	1000V 600V 600V	740 265 540	Connector
Gen. Elec.	UM-2 YMW-1	20,000 $\Omega/V$ 20,000 $\Omega/V$	30 KV 30 KV	5000 1000V	500 580	Pin Plug
Heath Co.	V1, V2 V2A, V4	VTVM	10 KV 30 KV	1000V 1000V	100 320	Phone Plug
Hickok	125 203 209	VTVM VTVM VTVM	10 KV 25 KV 12 KV	1000V 1000V 1200V	81 216 82.4	Pin Plug Connector
	435 534 538	20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$	25 KV 25 KV 25 KV	5000V 5000V 5000V	218.2 82.4 218.2	" "
Jackson	645	VTVM	10 KV	1000V	400	Pin Plug
Precision	EV-10 EV-20 10-54 85 654 850 852 854 856 858 954	VTVM VTVM 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$	30 KV 30 KV 30 KV 30 KV 30 KV 15 KV 25 KV 30 KV 30 KV 30 KV 30 KV	6000V 1200V 6000V 6000V 6000V 1500V 5000V 6000V 6000V 6000V 6000V	400 400 480 480 480 270 400 480 480 480 480	Connector Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug
RCA	WV-65A WV-75A WV-95A 162-A 162-B 162-C 165-A 170-A 195-A	VTVM VTVM VTVM VTVM VTVM VTVM VTVM VTVM VTVM	10 KV 30 KV 10 KV 30 KV 10 KV 12.5 KV 2.5 KV 10 KV 25 KV 12.5 KV 10 KV 30 KV 10 KV 10 KV	1000V 1000V 1000V 125V 125V 500V 500V 125V 1000V 1000V 100V 100V 1000V 1000V	100 320 100 320 100 1090 1090 210 540 1090 100 320 991 91	Connector Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug
Radio City	461 462 488-A 662-A 664 665-A 668	20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ VTVM VTVM VTVM VTVM	25 KV 25 KV 30 KV 30 KV 10 KV 30 KV 30 KV	5000V 5000V 6000V 6000V 1000V 1000V 6000V	400 400 480 641.3 100 320 641.3	Pin Plug Pin Plug Pin Plug Pin Plug Phone Plug Phone Plug Pin Plug
Reiner	451 661	VTVM VTVM	10 KV 30 KV 10 KV	1000V 300V 100V	100 1090 1090	Phone Plug
Roller-Smith	500	20,000 $\Omega/V$	30 KV	1500V	570	Pin Plug
Simpson	221 250 260 277 445 266 1005	Roto Ranger 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ VTVM 20,000 $\Omega/V$	30 KV 30 KV 25 KV 30 KV 25 KV 25 KV 25 KV	300V 1000V 5000V 1000V 5000V 5000V 5000V	594 580 400 580 400 800 400	Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug
Supreme	562 567 574 584	VTVM 20,000 $\Omega/V$ VTVM 20,000 $\Omega/V$	10 KV 30 KV 25 KV 10 KV 25 KV	1000V 1000V 5000V 2500V 2500V	135.9 437.9 400 120 360	Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug
Sylvania	134Z	VTVM	10 KV 30 KV	1000V 1000V	154 494	Pin Plug
Triplett	625-NA 630 2405-A 2541	20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$ VTVM	25 KV 30 KV 30 KV 30 KV 10 KV	2500V 6000V 1000V 300V 100V	450 480 580 1090 1090	Pin Plug Pin Plug Pin Plug Pin Plug Pin Plug
Weston	772 779 785	20,000 $\Omega/V$ 20,000 $\Omega/V$ 20,000 $\Omega/V$	30 KV 30 KV 30 KV	1000V 1000V 1000V	580 580 580	Pin Plug

GENERAL FOR ALL 20,000  $\Omega/V$  VOLT METERS

Resistors for all 20,000  $\Omega/V$  Volt meters with the following voltage ranges:

RANGE	RESISTOR FOR 10,000 VOLTS	RESISTOR FOR 30,000 VOLTS
1000	180M	580M
1500	170M	570M
2500	150M	550M
5000	100M	500M
6000	80M	480M

NOTE: On request we will supply resistors for practically any instrument with at least a 5,000  $\Omega/V$  \* sensitivity. The range may be extended up to and including 30,000 volts. In special cases a slight delay and/or extra charge may be necessary.

\* The voltage range on 5,000  $\Omega/V$  meters may only be extended to 10K volts; on 10K  $\Omega/V$  and above instruments, the range may be increased to 30K volts.





## OPERATING INSTRUCTIONS FOR HIGH VOLTAGE PROBE

### MODEL HVP-1

The EICO Model HVP-1 High Voltage Probe is designed for the measurement of voltages up to 30,000 volts in high voltage, low current circuits such as those in Television receivers. The Probe is NOT recommended for use in high voltage, high current circuits. The HVP-1 is used in conjunction with a vacuum tube voltmeter or instruments with 20,000 ohms per volt or better sensitivity. A special helical film, non-hygroscopic, steatite rod type, multiplier resistance is inside the Probe and is removable. Various resistance values for different instruments and ranges are obtainable. The Probe has a lucite head insuring high dielectric strength and low leakage. The handle is made of multi-layer, plywound bakelite material for greater insulation and high safety factor. Disc barriers are included to prevent the operator's hand from contacting HV tip and lengthen the leakage path.

Since the type of connector varies with different instruments, these are not supplied with the probe and can be obtained from your local jobber. The type of connector required is given in the attached chart.

### OPERATING INSTRUCTIONS

**WARNING:** The high potentials of power supplies of TV receivers are dangerous if care is not taken. The following precautions should be observed:

1. Hands, shoes, bench and floor must be DRY.
2. The Polystyrene Probe head and handle must be free of dust, dirt and moisture.
3. Fingers must NOT extend over or beyond the disc barriers of the Probe and keep one hand free of any apparatus at all times.
4. Become fully acquainted with the location of all high potential points within the device under test.
5. When testing, be extremely careful to prevent accidental contact with high potential points on TV chassis.

Refer to the attached chart for the correct multiplier resistance. Plug the connector of the HV Probe into the DC connector of the vacuum tube voltmeter or DC voltmeter (20,000 ohms per volt). Connect the ground lead of the VTVM to the receiver chassis. Turn the Range switch on the VTVM to the range given on the accompanying chart. All readings on this scale are multiplied by the multiplying factor given. For example: with the EICO Model 221 VTVM, for a multiplier resistance 740 megohms, a reading of 400 V. corresponds to a voltage of 12,000 V.

In measuring voltages over 15,000 volts, the following procedure is recommended: Before turning the high voltage equipment on, connect the High Voltage Probe tip to the High Voltage point, using a clip lead. Connect the ground lead. Then turn on the High Voltage equipment. This procedure eliminates the possibility of unforeseen accidents and allows the operator to take the meter reading accurately.



